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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,229	05/31/2001	Yu-Hwa Lo	NOVA-014	1700

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1251 AVENUE OF THE AMERICAS  
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NEW YORK, NY 10020-1105

EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT PAPER NUMBER

2828

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/871,229

Applicant(s)

LO ET AL.

Examiner

Armando Rodriguez

Art Unit

2828

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 21-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 25-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.



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TECHNOLOGY CENTER 2800**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Election/Restrictions***

Applicant's election without traverse of Group I claims 1-20 and 25-45 in Paper No. 8 is acknowledged.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: applicant has not recited the necessary structure to obtain a semiconductor laser but only recites a cavity and a deflection section.

Regarding claims 3,17,

It is not clear within the claim language as to which section applicant referencing when reciting "said sections".

Claim 13 recites the limitation "said top surface" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "said lens" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "said detector" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

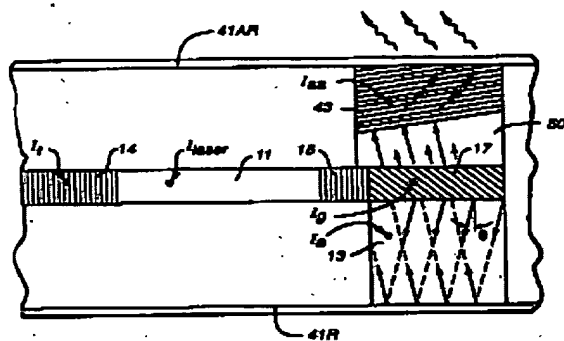
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12,17,18,25-27,32-34,39-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Scifres et al (PN 5,103,456).

Figure 8 illustrates a laser system formed within a common substrate, where the system is composed of a laser (11) having a cavity established by reflectors (14) and (15) the emitted light from the laser is deflected by an angled grating (17) towards mirror (41R), where the is reflected towards an output coupler (41AR) or alternatively (43). Output coupler grating (43) provides diffraction of the light, which will change the profile of the output beam. See column 3 lines 10-20, column 6 lines 51-68 and column 7 lines 1-26.



**FIG. 8**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-16, 28, 29, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scifres et al (PN 5,103,456) in view of Spaeth et al (PN 5,875,205).

Regarding claims 13-16, 19, 20, 28-31 and 35-38,

In figure 8 Scifres et al illustrates a laser system formed within a common substrate, where the system is composed of a laser (11) having a cavity established by reflectors (14) and (15) the emitted light from the laser is deflected by an angled grating (17) towards mirror (41R), where the is reflected towards an output coupler (41AR) or alternatively (43). Output coupler grating (43) provides diffraction of the light, which will

Art Unit: 2828

change the profile of the output beam. See column 3 lines 10-20, column 6 lines 51-68 and column 7 lines 1-26.

Scrifes et al discloses using an output-coupling grating for diffracting the output light beam, but does not disclose using a lens for providing the output diffraction of the light beam.

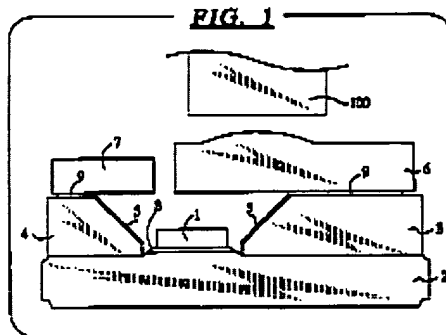
Spaeth et al discloses in column 2 lines 45-50 and illustrates in figure 1 the use of a lens (6), which is capable of diffracting or refracting an output light beam from a surface emitting semiconductor laser, therefore it would have been obvious to any person having ordinary skill in the art at the time the invention was made to disposed at the output of a surface emitting semiconductor, as in the laser of Scrifes et al, a lens, as the lens of Spaeth et al, because the lens has the capability of diffracting the output light beam.

Regarding claims 19,20,30,31,37 and 38,

Scrifes et al does not disclose a detector for monitoring the light beam.

Monitoring the light beam of a laser system is well known in the laser art, Spaeth et al discloses in column 2 lines 65-67 and illustrates in figure 1 the use of monitoring chip, which is one of many techniques used for monitoring or detecting the light beam of a laser system.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use any of the well-known techniques of monitoring a laser beam.



### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Armando Rodriguez whose telephone number is (703) 308-6218. The examiner can normally be reached on 10-hour day / M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-4881.

Armando Rodriguez  
Examiner  
Art Unit 2828

  
Paul Ip  
Supervisor  
Art Unit 2828

AR/PI